03 Jun 02

DEPARTMENT OF THE AIR FORCE
Air and Space Basic Course (AETC)
Maxwell Air Force Base, Alabama 36112

LESSON PLAN

A1320, INFORMATION SUPERIORITY

CONTENTS

RECORD OF CHANGES

CHANGE NUMBER	REMARKS
New Lesson Plan	Supercedes ABC lesson A1320 dated 27 Aug 01

SUMMARY OF CHANGES

EDUCATIONAL GOALS

A1000 Area Objective: Apply aerospace power capabilities and officership principles to warfighting.

A1300 Phase Objective: Comprehend how the Air Force Core Competencies enhance warfighting.

A1320 - INFORMATION SUPERIORITY

Lesson Objective 1: Know the historical development of the USAF Core Competency of Information Superiority.

Samples of Behavior:

(R/S) 1.1 - Identify historical examples of information superiority.

(R/S) 1.2 - Define the USAF Core Competency of Information Superiority.

Lesson Objective 2: Comprehend the significance of selected historical events in the development of the USAF Core Competency of Information Superiority.

Samples of Behavior:

(R/S) 2.1 - Explain the significance of the WWII Pacific Theater operations (MAGIC and Navajo Code-Talkers) as they relate to the USAF Core Competency of Information Superiority.

(R/S) 2.2 - Explain the significance of Operation BOLO in the development of the USAF Core Competency of Information Superiority.

Lesson Objective 3: Comprehend how the USAF Core Competency of Information Superiority contributes to aerospace operations.

Sample of Behavior:

(R/S) 3.1 - Explain the role of the USAF Core Competency of Information Superiority in the application of aerospace power.

Lesson Description: In this lesson, students discuss the importance of Information Superiority as one of the six Air Force Core Competencies. Students also discuss Information Superiority from two historical perspectives: the Pacific Theater in World War II (MAGIC and Navajo Code-Talkers) and Operation BOLO in Vietnam. This lesson explores the impact of Information Superiority on aerospace operations and how this Core Competency relates to the Airman's perspective of military operations.

Prerequisites: None

Preparation: Read A1320, Information Superiority.
Read AFDD 1, pp. 31-32.

Optional: N/A

Rationale/Linkage: The A1300 Phase of instruction focuses on the Air Force Core Competencies. According to AFDD 1, "Core competencies are at the heart of the Air Force's strategic perspective and thereby at the heart of the Service's contribution to our nation's total military capabilities. . . whether as a single Service or in conjunction with the core competencies of other Services in joint operations" (27). Students must understand the Air Force Core Competencies before a study of Joint Air Operations Planning (A1600 Phase) can commence. This particular lesson gives students a thorough understanding of Information Superiority, which is one of the six Air Force Core Competencies.

INSTRUCTIONAL PLAN

1. **TITLE AND LENGTH OF SEMINAR:** Information Superiority (1:00)

2. **RELATION TO OTHER INSTRUCTION:** The A1300 Phase of instruction focuses on the Air Force Core Competencies. According to AFDD-1, "Core competencies are at the heart of the Air Force's strategic perspective and thereby at the heart of the Service's contribution to our nation's total military capabilities. . . whether as a single Service or in conjunction with the core competencies of other Services in joint operations" (27). Students must understand the Air Force Core Competencies before a study of Joint Air Operations Planning (A1600 Phase) can commence. This particular lesson gives students a thorough understanding of Information Superiority, which is one of the six Air Force Core Competencies.

3. **GENERAL METHOD OF INSTRUCTION:**

   a. Presentation Method: Guided discussion

   b. Time Outline:

Segment Time	Total Time	Description
0:10	(0:10)	Introduction
0:10	(0:20)	MP I: Information Superiority
0:25	(0:45)	MP II: Historical Examples 1. Pacific Theater in WWII 2. Operation BOLO
0:10	(0:55)	MP III: Current and Future Application
0:05	(1:00)	Conclusion

   c. Instructor Preparation:

- Review the lesson plan.
- Read A1320, Information Superiority.
- Review AFDD 1, pp. 31-32.

d. Instructional Aids/Handouts:

- None

e. Student Preparation:

- Read A1320, Information Superiority.
- Read AFDD 1, pp. 29-30.

f. Strategy: This lesson is a guided discussion. The instructor should get the students' attention by making a relevant analogy to information superiority. During the motivation step, explain the analogy and the importance of information superiority. Begin with the knowledge-based questions about the USAF core competency of information superiority. Use the historical examples to emphasize the key points in the definition of information superiority and bring out how the principles of war and the air and space power functions contributed to information superiority in those examples. Next, get the students to discuss information superiority as it applies to them, both as ASBC students and as AF officers. Finally, wrap up the lesson by hitting the lesson objectives again and reminding them of the "so what." Core competencies are the basic areas of expertise that the Air Force brings to the fight. Airmen must be able to master these core competencies, if they are to employ aerospace power properly.

g. References: N/A

4. **DETAILS OF INSTRUCTION**:

a. Introduction: 0:10 (0:10)

1) //Attention//

How would you like to play a game of poker against a person who had all the cards marked and an ace up his sleeve? You would be better off just handing your money over to him. It would save you the embarrassment and stress of losing hand after hand over the course of the game. In warfare, that's what information superiority does for you; it gives you the marked deck.

2) //Motivation//

Today, we are well entrenched in what has been called the "Information Age." In business and in warfare, "information" has become a very important commodity, so you must understand how it affects you as a student here at ASBC, as officers in the Air Force, and as a member of society. Only by becoming masters of information can we become masters of aerospace power. Only by becoming masters of information can you pass the test you will be taking in the next couple of weeks.

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3) //Overview//

Let's make that test a little easier for you by getting into the details of Information Superiority. First, we will look at information superiority from a doctrinal perspective. We will look into how our doctrine defines information superiority and the process for attaining it. We will then examine two historical examples to better understand where that doctrine came from. We will also be able to apply the definitions we have just learned to get a better idea of what information superiority is. Finally, we will look at our current situation, both as an ASBC flight and as an Air Force, and examine how information superiority applies today.

(TRANSITION): LET'S BEGIN EXAMINING INFORMATION SUPERIORITY FROM A DOCTRINAL PERSPECTIVE.

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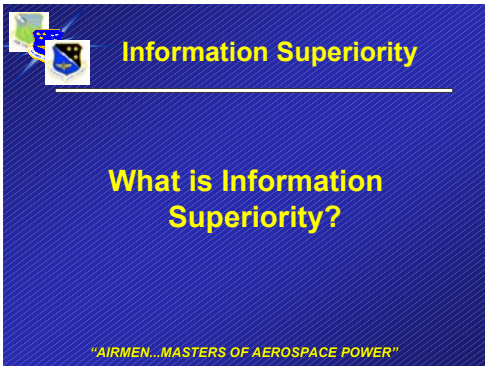

b. MP I: Information Superiority: 0:10 (0:20)

***{Instructor note**: All of the quotations in MP1 are from AFDD 1 and AFDD 2-5}*

LEAD OFF QUESTION (LOQ): WHAT IS INFORMATION SUPERIORITY?

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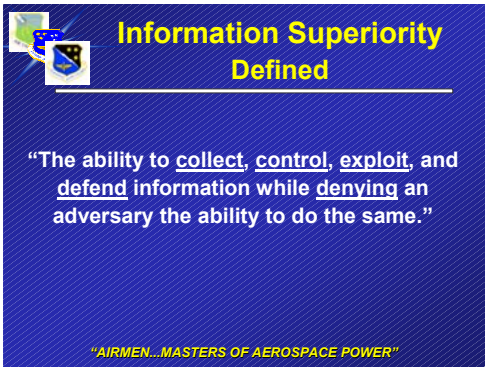

ANTICIPATED RESPONSE (AR): Information superiority is "the ability to collect, control, exploit, and defend information while denying an adversary the ability to do the same." This does not imply that having more information than the enemy leads to having information superiority. The information must be "accurate and usable, and must not overwhelm the user." The ultimate goal of information superiority is to achieve "faster and more effective command and control of assigned forces than the adversary." We want to increase the speed and efficiency of our own observe-orient-decide-act (OODA) loop while decreasing the speed and efficiency of the enemy's OODA loop.

***{Instructor note**: AFDD 2-5 defines Information Superiority as the "degree of dominance in the information domain which allows friendly forces the ability to collect, control, exploit, and defend information without effective opposition." Although this definition is newer and will likely be incorporated in the next revision of AFDD 1, we can only expect the students to know what is currently in AFDD 1 for the test, since this is the only document we give them.}*

FUQ: HOW DO WE GAIN AND MAINTAIN INFORMATION SUPERIORITY?

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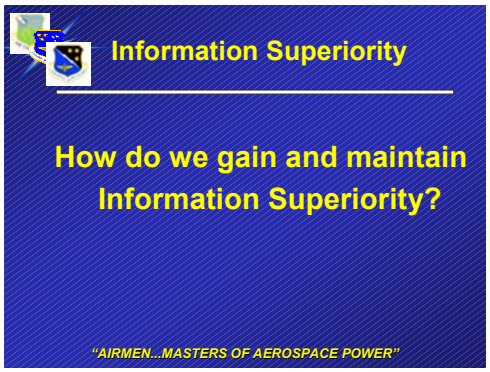

AR: Air and space power is employed through the air and space power functions. When we think of information superiority, the predominant air and space power functions are counterinformation, intelligence/surveillance/reconnaissance (ISR), and command and control (C^2).

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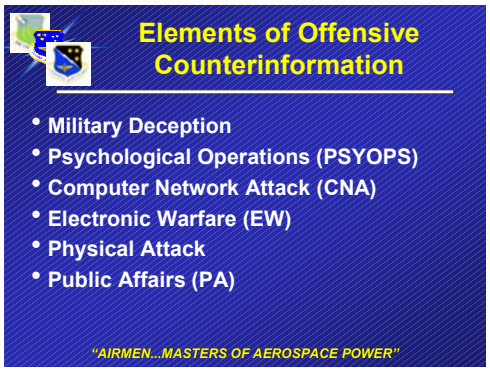

Offensive counterinformation (OCI) seeks to "disable selected enemy information operations." AFDD 2-5 divides OCI into six categories of operations: Military Deception, Psychological Operations, Computer Network Attack, Electronic Warfare, Physical Attack, and Public Affairs.

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Defensive Counterinformation (DCI) seeks to "protect our information, information systems, and information operations from the adversary." AFDD 2-5 divides DCI into eight categories: Counterintelligence, Counterdeception, Counterpropaganda, Computer Network Defense, Operations Security, Information Assurance, Electronic Protection, and Public Affairs.

*{**Instructor note:** The focus of this lesson is on AFDD 1, not AFDD 2-5. The students only need to know that OCI and DCI are broken down into sub-categories of operations. Their lecture on "Information Operations" will give them the detail of the operations they need for this course.}*

(TRANSITION): NOW THAT WE'VE EXPLORED THE USAF CORE COMPETENCY OF INFORMATION SUPERIORITY, LET'S LOOK AT SOME HISTORICAL EXAMPLES THAT RELATE TO INFORMATION SUPERIORITY.

c. MP II: Historical Examples: 0:25 (0:45)

Pacific Theater in WWII:

The first aspect of information superiority we will examine is "information in warfare" (IIW). AFDD 2-5 defines IIW as "a term that describes a broad range of information functions that help provide commanders the means to gain and exploit information." The MAGIC code-breakers of the WWII Pacific Theater provide an excellent example of gaining and exploiting information.

*{**Instructor note:** The focus of this example is on collecting and exploiting information. Students should realize that collection is a process, not a singular act. It is not enough to have more information than the enemy – it has to be the right information in the right format to be useful. Exploitation should be introduced, but will be discussed in more detail in the Operation BOLO example}*

[SLIDE]

LOQ: HOW WAS INFORMATION COLLECTED BY SPECIAL BRANCH, M.I.S.?

AR: The Special Branch intercepted, decoded and translated messages, but much more work was needed to make the data "usable" and not "overwhelming." They conducted collateral investigations, including research into Japanese merchant vessels and cooperation with other intelligence agencies to clarify and connect bits of data into a coherent story. The reading referred to "High-class detective methods" used to determine the significance of various bits of data. Had this collection process not been employed, the messages received would have been "largely incomprehensible".

FUQ: ALTHOUGH NOT DIRECTLY ADDRESSED IN THE READING, HOW DO YOU THINK INFORMATION WAS EXPLOITED IN THIS EXAMPLE?

AR: The knowledge of Order of Battle numbers probably gave commanders great insight into the plans of the Japanese. If nothing else, it allowed the commanders to understand the force structure they were up against. The political knowledge gained from the Special Branch likely gave the Allied political leaders an upper hand in diplomatic efforts going on at the time. Specifically, the knowledge that

Japan had no intention of going to war with Russia, could have had a tremendous effect on war preparations in the US. Ship movements were very important in WWII, and knowledge of the shipping "picture" probably allowed commanders better opportunity to interrupt that shipping.

(TRANSITION): THE US TRIED DILIGENTLY TO COLLECT AND CONTROL INFORMATION IN WWII, BOTH IN THE EUROPEAN AND PACIFIC THEATERS. EQUALLY IMPORTANT WAS DENYING OUR INFORMATION TO THE ENEMY. NO OPERATION ACCOMPLISHED THIS TASK BETTER THAN THE US MARINE CORPS NAVAJO CODE TALKERS.

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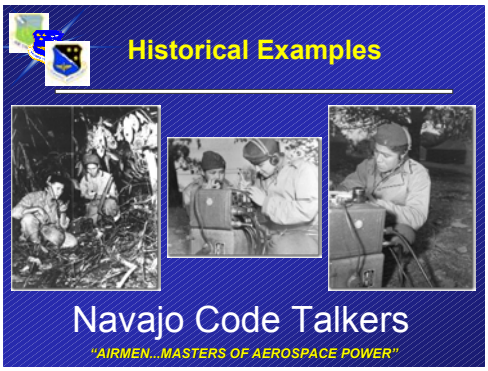

LOQ: DESCRIBE THE ABILITY OF THE MARINE CORPS TO DENY INFORMATION BEFORE THE USE OF NAVAJO CODE TALKERS?

AR: The Marine Corps had trouble before the use of the Code Talkers. Traditional codes took too long to encode/decode in the frantic pace of combat operations, so alternative, less effective methods were employed. Sometimes, commanders reverted to plain English, "the profaner, the better," with devastating results. Even if commanders did not have to revert to English, the intercept and code-breaking skills of the Japanese were exemplary. The reading gives the example of Rabaul in the Bismark Archipelago, which was nicknamed "Dead End" because the Japanese were able to intercept air control net messages and prepare their anti-aircraft guns for the bombers that would be passing through.

FUQ: WHY WAS THE NAVAJO CODE SO SUCCESSFUL?

AR: First, Navajo was a "hidden" language, meaning only someone immersed in the culture would be fluent in it. At the time, only 28 non-Navajo could speak the

language. Since the language has no written component, "foreigners" would have great difficulty learning the basics of the language, which put great emphasis on vocal inflections, much less becoming fluent in it. Second, even if the language was intercepted and translated, it was encoded in such a way as to be incomprehensible to the receiver, unless the receiver was also a Code Talker.

***{Instructor note**: This is called "double-coding" and proved to be very effective. The Japanese captured a Navajo soldier at Bataan before the Code Talkers were used in the Pacific. During his interment, an interrogator noticed his speech was similar to the garbled messages they had been intercepting. When asked to translate the message, he did (unaware of the code-talker program). The prisoner could not understand the message, even after translating it. He survived his imprisonment, but was tortured repeatedly, including freezing his feet to the ground in a frozen field, because the Japanese thought he was deliberately withholding the code.}*

FUQ: WHAT EFFECT DID THE NAVAJO CODE HAVE ON MARINE CORPS OPERATIONS?

AR: The ability to control information and deny information to the enemy negated the problems faced prior to the use of Code Talkers. A specific example from the article is the sharp decrease in "sneak" attacks on long-range bomber operations. One problem encountered was the occasional mistaken identity of the code talkers. US Forces, from time to time, came across an Asian-looking soldier, speaking a somewhat Asian-sounding language, wearing a US Marine uniform, and reacted by taking the "infiltrator" prisoner. There were no reported cases of fratricide as a result of this mistaken identity, but there were several close calls.

(TRANSITION): WE HAVE DISCUSSED COLLECTING, CONTROLLING, EXPLOITING, AND DENYING "INFORMATION-IN-WARFARE". NOW LET'S LOOK AT A HISTORICAL EXAMPLE OF THE OTHER ASPECT OF INFORMATION OPERATIONS: INFORMATION WARFARE (IW).

Operation BOLO:

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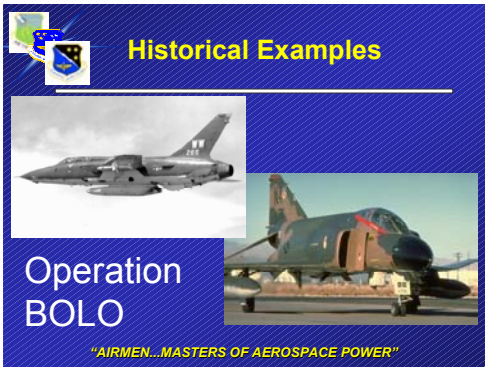

LOQ: WHAT WAS THE OBJECTIVE OF OPERATION BOLO?

AR: The objective was to trick North Vietnamese MiG-21s, which had been very successful against US F-105s, into engaging US F-4s that were rigged for aerial combat. They would be lured into the air, then denied access to their airfields. The result would be destruction in combat or crash due to loss of fuel. First, however, the MiGs had to be airborne.

FUQ: WHAT WAS THE SIGNIFICANCE OF THE QRC-160 PODS?

AR: These were electronic countermeasures which were used in an information superiority role by F-105 Thunderchiefs to negate the threat of radar-guided surface to air missiles and anti-aircraft artillery. During Operation BOLO, F-4s flew the same routes as the F-105s, using the same type of radio chatter, and emitting the same signals from the QRC-160 pods, giving the North Vietnamese the impression that F-105s were flying in to drop bombs. The pods had the added effect of jamming the potentially deadly ground fire over the target area. The illusion was effective, but other information superiority methods were employed to make the entire operation a success.

FUQ: WHAT WERE THE OTHER INFORMATION SUPERIORITY METHODS USED IN OPERATION BOLO?

AR: Intelligence gathered from previous encounters and other sources told US commanders how many MiGs the North Vietnamese had, where they were located,

what their engagement tactics were and what their escape routes were. This information was vital to the plan and its success.

FUQ: WHAT WAS THE RESULT OF OPERATION BOLO?

AR: Seven out of 14 MiGs encountered were destroyed, one short of half their 16-MiG inventory. When the remaining MiGs later jumped an RF-4C reconnaissance plane, a similar ruse was attempted resulting in the downing of two more MiGs, after which, the remaining MiGs went into a three-month stand down.

(TRANSITION): WE'VE LOOKED AT INFORMATION SUPERIORITY FROM MILITARY HISTORY. NOW IT IS TIME TO DISCUSS INFORMATION SUPERIORITY AS IT APPLIES TODAY AND IN THE FUTURE.

d. MP III: Current and Future Application: 0:10 (0:55)

[SLIDE]

LOQ: HOW DID YOU SEE INFORMATION SUPERIORITY APPLIED IN AFEX?

AR:
*{**Instructor note:** This should be an open discussion using ideas that came from the flight's AFEX experience. Here are some general ideas the students might discuss. What type of information did they collect (Map layout, rules, previous lessons, A/C types, etc)? How did they use their information? Did they develop a strategy? How did they protect that strategy from the opponent?, etc.}*

FUQ: HOW DO YOU THINK INFORMATION SUPERIORITY WILL BE USED IN AIRGAP?

AR:
*{**Instructor note:** Since this exercise is a future event, the discussion will probably be a little less detailed than the discussion on AFEX, but the students should be able to relate the general idea of using OCI/DCI within the parameters of the exercise.}*

FUQ: HOW DO YOU THINK YOU WILL CONTRIBUTE TO INFORMATION SUPERIORITY IN YOUR AF JOB?

AR:
*{**Instructor note:** Generally, students should be able to relate how they contribute to the gaining and maintaining of information superiority within their career fields and/or how gaining and maintaining information superiority would be required for them to do their jobs.}*

e. Conclusion: 0:05 (1:00)

1) //Summary//

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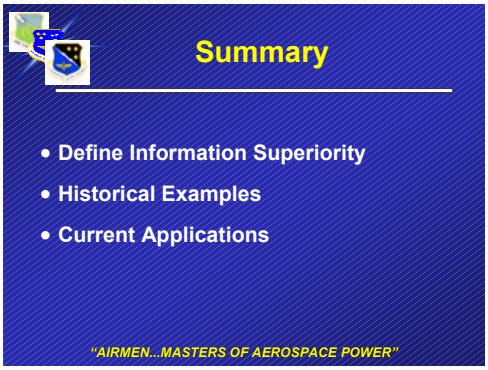

This lesson was your first step towards understanding the Air Force Core Competency of Information Superiority. We began by talking about and defining the core competency of information superiority. We then discussed Information-In-Warfare through the examples of US forces in the Pacific Theater of WWII. Next, we examined Information Warfare through Operation BOLO in Vietnam.

Finally, we examined how information superiority affects you, both as an ASBC student and an Air Force officer.

2) //Remotivation//

Core competencies describe what the Air Force brings to the fight. Your comprehension of information superiority and the other core competencies will be essential to your success in the AFEX and AIRGAP wargames. It is also essential that you understand the core competencies for the execution of Blue Thunder II.

3) //Closure//

Just as you should never play a game of poker when the deck is marked, you should also never fight a war without information superiority.